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[Continued on next page]

(54) Title: METHOD FOR DETERMINING NORMAL MEASUREMENTS FOR A PATIENT

HC (in cm)	AC (in cm)	FL (in cm)	GESTATIONAL AGE (WEEKS)
---	5.3	---	12
---	6.3	1.0	13
10.6	7.5	1.2	14
11.5	8.5	1.6	15
12.7	9.7	1.8	16
14.0	10.7	2.2	17
15.2	11.6	2.5	18
16.4	12.6	2.8	19
17.6	13.5	3.1	20
19.0	14.5	3.4	21
20.3	15.5	3.6	22
21.5	16.5	3.9	23
22.6	17.3	4.1	24
24.0	18.3	4.4	25
25.1	19.1	4.7	26
26.3	20.2	4.9	27
27.4	21.1	5.1	28
28.4	22.2	5.4	29
29.3	23.0	5.6	30
30.3	24.0	5.9	31
31.1	24.9	6.1	32
31.8	25.8	6.3	33
32.5	26.8	6.5	34
33.2	27.7	6.7	35
34.0	28.7	6.9	36
34.6	29.6	7.1	37
34.4	30.6	7.3	38
34.7	31.5	7.4	39
34.9	32.0	7.5	40

(57) Abstract: Method and system for determining a norm to apply to a patient being examined in which at least one physical characteristic of the patient is determined from the examination and guidelines relating thereto are obtained. Information about the patient other than from the examination and established norms for each characteristic are also obtained. An established norm to be applied to the patient is selected based on the determination of the characteristic(s), the guidelines relating to the determination thereof, and the information about the patient other than from the examination. The selection of the norm is performed by an inference engine. The norm is applied to the characteristic, e.g., a measured anatomical feature, to obtain a normal value therefor. The measured anatomical feature is compared to the normal value to determine whether it is indicative of a normal or abnormal condition.

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Declaration under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 03/05801

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B8/08 G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, MEDLINE, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/56132 A (WALD NICHOLAS JOHN) 4 November 1999 (1999-11-04) page 7, line 19 - page 9, line 9	1,2,4,5
A	-----	12,13
X	MACHADO L S M ET AL.: "Evaluation of applicability of standard growth curves to healthy native Omani women by fetal biometry at selected gestational ages" MEDICAL SCIENCES, 2000, pages 97-104, XP002273370 Sultan Qaboos University page 98, left-hand column, line 13 - 20 page 103, left-hand column, line 11 - 20 page 103, section "Conclusion", first sentence ----- -/--	1,2,4,5

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Intern at Application No

PCT/18 03/05801

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>TONGSONG T ET AL: "Sonographic diagnosis of intrauterine growth restriction (IUGR) by fetal transverse cerebellar diameter (TCD)/abdominal circumference (AC) ratio." INTERNATIONAL JOURNAL OF GYNAECOLOGY AND OBSTETRICS: THE OFFICIAL ORGAN OF THE INTERNATIONAL FEDERATION OF GYNAECOLOGY AND OBSTETRICS. IRELAND JUL 1999, vol. 66, no. 1, July 1999 (1999-07), pages 1-5, XP002273371 ISSN: 0020-7292 page 2, left-hand column, line 27 - 53 -----</p>	1,3,4,6, 12,13
A	<p>US 5 891 035 A (ROUNDHILL DAVID N ET AL) 6 April 1999 (1999-04-06) column 7, line 59 - column 8, line 4 -----</p>	1,12,13

INTERNATIONAL SEARCH REPORT

In tional application No.
PCT/IB 03/05801

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-11,13-20

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-11,13-20

Method for determining norm based on ratio of anatomical features

1.1. claims: 13-20

System for determining norm having processor arranged to select norm

2. claim: 12

Method for determining norm using XML syntax, HL7 messaging, semantic web technology and inference engine

INTERNATIONAL SEARCH REPORT

Intern Application No

PCT/IB 03/05801

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9956132	A	04-11-1999	
		AU 763171 B2	17-07-2003
		AU 3621399 A	16-11-1999
		CA 2330538 A1	04-11-1999
		EP 1076824 A1	21-02-2001
		WO 9956132 A1	04-11-1999
		US 6573103 B1	03-06-2003
		US 2003175981 A1	18-09-2003

US 5891035	A	06-04-1999	
		US 5715823 A	10-02-1998
		AU 704680 B2	29-04-1999
		AU 3924697 A	02-04-1998
		BR 9705239 A	20-03-2001
		CA 2216123 A1	25-03-1998
		CN 1185308 A	24-06-1998
		EP 0833266 A2	01-04-1998
		JP 10179581 A	07-07-1998
		NO 974389 A	26-03-1998
		US 5938607 A	17-08-1999
		US 5897498 A	27-04-1999
		AU 4534397 A	28-05-1998
		BR 9705770 A	23-11-1999
		CA 2221908 A1	21-05-1998
		CN 1192882 A	16-09-1998
		EP 1349100 A2	01-10-2003
		EP 1349101 A2	01-10-2003
		EP 0844581 A2	27-05-1998
		JP 10179586 A	07-07-1998
		NO 975308 A	22-05-1998
